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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/894,246	05/22/98	PERRICAUDET M	EX95001-US

005487 HM12/0609
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EXAMINER	
CHEN, S	
ART UNIT	**PAPER NUMBER**
1633	8

DATE MAILED: 06/09/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 08/894,246	Applicant(s) Perricaudet et al.
	Examiner Shin-Lin Chen	Group Art Unit 1633

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *26-56* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *26-56* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 7

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

This application is a 371 of PCT/FR96/00218 filed 2-12-96. The applicant claims priority of foreign application France 01662 filed 2-14-95.

Election/Restriction

1. Claims 26-56 are generic to a plurality of disclosed patentably distinct species comprising an immunosuppressive agent and an immunoprotective gene. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Mr. Ross Oehler on 5-14-99 a provisional election was made with traverse to prosecute the invention of antibodies, claims 27 and 45; CTLA4Ig, claims 28 and 46; gp19K of adenovirus, claims 33 and 51. Affirmation of this election must be made by applicant in replying to this Office action. Non-elected species withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 26-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leibowitz et al., 1994 (N) in view of Linsley et al., 1992 (U) and Marshall, 1995 (V).

Claims 26-56 are directed to a composition comprising an immunosuppresive agent and a recombinant adenovirus expressing a therapeutic gene and an immunoprotective gene (e.g. gp19K) and a method for expression of said therapeutic gene comprising consecutively or simultaneously administering said immunosuppressive agent (e.g. CTLA4Ig) and said recombinant adenovirus into a subject.

Leibowitz et al. teach construction of a recombinant retroviral vector containing adenoviral E19 (i.e. gp19K) gene and neomycin resistance gene (neo) under the control of CMV promoter, production of recombinant retrovirus by using said retroviral vector, the use of adenoviral vector for the expression of E19 and neo gene (e.g. pages 8-10 and 17), and to infect cells in vitro or in vivo using said retrovirus or adenoviral vector. Leibowitz et al. also teach a method of treating donor cells to reduce recipient rejection caused by MHC class I surface antigens and use of said donor cells to treat genetic disorder (e.g. pages 31 and 34). Leibowitz et al. do not teach administer virus or vector into a subject in combination with an

immunosuppressive agent such as CTLA4Ig. Linsley et al. show CTLA4Ig treatment in vivo suppresses T-cell dependent antibody responses to sheep erythrocytes, large doses of CTLA4Ig suppresses response to a second immunization (see e.g. abstract). The arrangement of therapeutic gene and E19 gene in a vector, e.g. in a single transcriptional entity or in the same orientation, and the sequential order of administering immunosuppressive agent and adenovirus are routine optimization of a result-effective variable and is obvious to a person of ordinary skill. The donor cells taught by Leibowitz et al. can be used for gene thrapy, so obviously the donor cells could be genetically modified to express a "therapeutic" gene. Furthermore, Marshall pointed out that adenovirus genes express proteins that trigger immune responses, large concentrations of wild virus- and even crippled virus- provoke inflammation along with an immune attack that neutralizes cells containing adenovirus genes (e.g. page 1052). One would have been motivated at the time of the invention to administer an immunosuppressive agent such as CTLA4Ig, to prevent or reduce the immune response triggered by adenovirus and combined with a recombinant adenovirus expressing a therapeutic gene and an immunoprotective gene such as gp19K of adenovirus, consecutively or simultaneously to a subject. Thus it would have been obvious for a person of ordinary skill at the time of the invention to have practiced the claimed invention in claims 26-56 with reasonable expectation of success. Therefore, claims 26-56 are rejected under 35 U.S.C. 103(a).

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shin-Lin Chen whose telephone number is (703) 305-1678. The examiner can normally be reached on Monday to Friday from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Stanton can be reached on (703) 308-2801. The fax phone number for this group is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0196.

Shin-Lin Chen, Ph.D.

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